

**BEFORE THE  
NATURAL RESOURCES COMMISSION  
OF THE  
STATE OF INDIANA**

**IN THE MATTER OF:**

<b>RULE AMENDMENTS RELATING TO</b>	<b>) Administrative Cause</b>
<b>ENDANGERED SPECIES OF REPTILE S</b>	<b>) Number 10-170D</b>
<b>AND AMPHIBIANS</b>	<b>) (LSA Document # 11-196(F))</b>

**REPORT ON RULE PROCESSING, CONSIDERATION OF PUBLIC COMMENTS,  
ANALYSIS AND RECOMMENDATION REGARDING FINAL ADOPTION**

**1. RULE PROCESSING**

For consideration is a proposal that will remove the Four-Toed Salamander from and add the Plains Leopard Frog and Mole Salamander to the list of endangered species of reptiles and amphibians at 312 IAC 9-5-4.

The Natural Resources Commission (*NRC*) granted preliminary adoption of this rule amendment proposal on November 16, 2010.

The “Notice of Intent” to adopt the proposed rule amendment was posted to the INDIANA REGISTER database website as 20110413-IR-312110196NIA on April 13, 2011. The notice identified Linnea Petercheff, Department of Natural Resources, Division of Fish and Wildlife, as the “small business regulatory coordinator” for purposes of Indiana Code § 4-22-2-28.1.

As specified by Executive Order, fiscal analyses of the rule proposal were submitted, along with a copy of the proposed rule language and a copy of the posted Notice of Intent, to the Office of Management and Budget on April 14, 2011. In a letter dated May 24, 2011, Adam. M. Horst, Director, Office of Management and Budget, recommended that the proposed rule amendments be approved.

The NRC Division of Hearings submitted the rule proposal to the Legislative Services Agency (*LSA*) along with the “Statement Concerning Rules Affecting Small Business” (also known as the “Economic Impact Statement”) on June 3, 2011. The Notice of Public Hearing was submitted to LSA on June 7, 2011. The Notice of Public Hearing, along with the Economic Impact Statement and the text of the proposed rule was posted to the INDIANA REGISTER database website on June 15, 2011 as 20110615-IR-312110196PHA. Following receipt of an “Authorization to Proceed” from LSA on June 10, 2011, the NRC Division of Hearings also

caused a Notice of Public Hearing to be published by the Indianapolis Newspapers, a newspaper of general circulation in Marion County, Indiana, on June 20, 2011. In addition, notice of the public hearing and a summary of the proposed rule changes were published on the NRC's web-based electronic calendar.

## **2. REPORT OF PUBLIC HEARING AND COMMENTS**

### **a) Public Hearing Comments**

A public hearing was conducted as scheduled on August 3, 2011 at the NRC Division of Hearings office located in Indianapolis, Indiana. Jennifer Kane served as the hearing officer. Lee Casebere of the Department of Natural Resources, Division of Nature Preserves also attended. No member of the public attended.

### **b) Comments Received Outside Public Hearing**

The opportunity to submit written public comments was available from approximately November 16, 2010 until August 8, 2011. The written comments have been attached to this report as Exhibit A, which is incorporated by reference.

### **c) Response by the Department of Natural Resources**

The Department responded to the public comments on August 17, 2011. A copy of the Department's response is attached as Exhibit B, which is incorporated by reference.

## **3. ANALYSIS AND RECOMMENDATION**

The proposal to include the Plains Leopard Frog and the Mole Salamander to the endangered species list has met with unanimous support from the commenting public. The removal of the Four-Toed Salamander is opposed by one individual offering a comment.

Joe Collins, who opposes the removal of the Four-Toed Salamander from the endangered list, indicates that all amphibians are "in danger of extinct[ion] due to a new fungus" but fails to identify the fungus referred to or elaborate upon this statement by providing any evidence of true danger to amphibian species. The lack of information prevents a true assessment of Mr. Collins' opposition.

Individuals who offered comments in support of the rule as proposed and who agree with the Department's Division of Fish and Wildlife (DFW) analysis include Nathan Enbrecht from the Indiana State University Biology Department, Michael Lodato who previously served as the chair of the Department's Technical Advisory Committee for Amphibians and Reptiles and Lee

Casebere from the Department's Division of Nature Preserves. Each of these individuals supports the DFW's report that the Four-Toed Salamander's existence is more widespread than previously believed. The DFW reports that the Four-Toed Salamander exists "in at least twenty Indiana counties." With respect to the Plains Leopard Frog and the Mole Salamander, there is agreement that the populations are limited. Reports indicate that the Mole Salamander is only known to exist in one nature preserve located in Posey County and the Plains Leopard Frog, which is "poorly known", is suffering from a loss of habitat. The DFW reports that the existence of the Plains Leopard Frog cannot be confirmed in locations where it was documented to exist within the previous 10 years.

It is recommended that the proposed rule, the language for which is set forth and incorporated at Exhibit C, be granted final adoption without revision.

Dated: August 22, 2011

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Sandra L. Jensen  
Hearing Officer

## EXHIBIT A

Commentor Name Joe Collins

Commentor County 55

Commentor State IN

Commentor City Martinsville

Commentor Organization

Commentor Email [Email Commentor](#)

Comment Please keep the 4- toed salamander on the list! All amphibians are in danger of extinct due to a new fungus. The 4- toed salamander needs full protection. All amphibians need full protection.

Time stamp

Commentor Name Christopher A Carver Jr.

Commentor County 26

Commentor State IN

Commentor City owensville

Commentor Organization

Commentor Email [Email Commentor](#)

Comment I concur.

Time stamp 07/07/2011 07:58:51 PM

Commentor Name Michael J. Lodato

Commentor County 82

Commentor State IN

Commentor City Evansville

Commentor Organization unaffiliated

Commentor Email [Email Commentor](#)

Comment I served as chairman of the DNR's Technical Advisory Committee for Amphibians and Reptiles at the time all three of these herps were recommended for a change in conservation status. These changes were supported by the TAC. Clearly the limited range and low population numbers indicate that the mole salamander and the plains leopard frog be classified as endangered. However, between 2003 and 2010, I collaborated with Lee Casebere in a statewide study of the four- toed salamander. Our study (to be published in the next issue of Proceedings of the IAS) shows that this salamander is more widespread and more abundant than previously thought (we now know of 29 colonies in 21 counties and added 7 new county records) and thus should be removed from the state endangered category. Some local populations are small and isolated and thus we have recommended the administrative category of "species of special concern" for the four- toed salamander.

I support the addition of the mole salamander and the plains leopard frog to the list of state endangered species; I support removing the four-toed salamander from the list of state endangered species.

Time stamp 08/03/2011 06:50:18 PM

Commentor Name Nathan Engbrecht

Commentor County 84

Commentor State IN

Commentor City Terre Haute

Commentor Organization Indiana State University

Commentor Email [Email Commentor](#)

Comment I am writing in support of delisting the Four-toed Salamander from, and inclusion of the Plains Leopard Frog and Mole Salamander to, the Indiana State Endangered Species list. Recent work by Lee Casebere and Michael Lodato have shown that Four Toed Salamanders are more common and widespread than originally thought. The species does not appear to be at risk of extinction, and I would like to support downlisting it to "Special Concern" status.

The extremely limited range of the Mole Salamander in Indiana (essentially from a small portion of Posey County) warrants it's inclusion on the State Endangered Species list. It's relatively recent discovery in Indiana (2004) by Rod Williams and Brian MacGowan led to subsequent surveys being performed by IDNR researchers in the regions of it's original discovery. To my knowledge, the species is known to breed in only one definitive wetland in the state.

Plains Leopard Frogs are perhaps the most elusive frog in Indiana, not necessarily because it has secretive habits, but because of it's apparent rarity. The frog apparently went undocumented in the state for 30 years until a single specimen was located in an agricultural ditch near Terre Haute in 2008. Very little is known about this species in Indiana, and only one specimen has been documented in the past three decades.

Thank you for your consideration of these recommendations,

Sincerely,

Nathan Engbrecht

Biology Department

Indiana State University

Time stamp 08/04/2011 05:35:03 AM

Commentor Name Michael J. Lannoo

Commentor County 84

Commentor State IN

Commentor City Terre Haute

Commentor Organization Indiana University School of Medicine

Commentor Email [Email Commentor](#)

Comment I am writing this letter to support the proposed down-listing of Four-toed Salamanders and inclusion of Mole Salamanders and Plains Leopard Frogs on the State Endangered Species list. I (Nathan Engbrecht) am writing this letter on behalf of my supervisor, Dr. Michael Lannoo, who wished to write in support of these proposed measures, but who is currently out of state and does not have sufficient internet access at his location.

Please feel free to contact myslef (812-237-8301) or Dr. Lannoo (812-237-8162) should you have any questions.

Sincerely,

Nathan Engbrecht

Biology Department

Indiana State University

Time stamp 08/04/2011 06:07:50 AM

FILED

AUG 03 2011

NATURAL RESOURCES COMMISSION  
DIVISION OF HEARINGSComments regarding proposed changes to the reptile & amphibian endangered species list

My name is Lee Casebere, and I work for the DNR Division of Nature Preserves. I support the removal of four-toed salamander from the endangered species list. From 2003 through 2010, Michael Lodato and I have conducted searches to find four-toed salamanders within the state. Our work resulted in finding the salamander at 15 sites where it was previously unknown, and we re-found it at several locations where it had been many years since the last reports. Based on our work and the work of other biologists, we currently know of 29 extant populations of this salamander from 21 Indiana counties, and we are confident that additional populations exist where suitable habitat is found. Although it is still one of Indiana's least common salamanders, its numbers are higher than known before our studies. It is clear that its status is such that it is not in imminent danger of extirpation from the state, and designation as endangered appears to be unwarranted.

Regarding the addition of the mole salamander to the endangered species list, it is a recent discovery in Indiana, and is known from only one site in a Posey County nature preserve. This appears to be a relict population that is disjunct from other known populations of the species, and is thus not an increasing species that has spread into the state as a result of a population expansion. It is possible that other populations of this salamander may be found elsewhere in southwestern Indiana, but searches in nearby habitat have been unsuccessful. Designation as endangered for this species in Indiana is a wise choice based on known information.

Regarding the addition of the plains leopard frog to the endangered species list, there are very few records for this frog in Indiana. There are only three records in the Indiana Natural Heritage Data Center -- two from Orange County in 2003, and one from Jasper-Pulaski Fish & Wildlife Area in 1934. In Amphibians & Reptiles of Indiana by Sherman A. Minton, Jr., five records are indicated, including the one from the Jasper-Pulaski area. This species is very poorly known in Indiana, and its designation as endangered appears to be a wise choice.

Submitted by Lee Casebere to the Natural Resources Commission  
August 3, 2011

## EXHIBIT B

### DNR Response

The DNR is required to review the list of endangered species every two (2) years and make appropriate amendments under IC 14-22-34-11. In state law, "endangered species" means any species or subspecies of wildlife whose prospects of survival or recruitment within Indiana are in jeopardy or are likely within the foreseeable future to become so due to any of the following factors:

- (1) The destruction, drastic modification, or severe curtailment of the habitat of the wildlife.
- (2) The overutilization of the wildlife for scientific, commercial, or sporting purposes.
- (3) The effect on the wildlife of disease, pollution, or predation.
- (4) Other natural or manmade factors affecting the prospects of survival or recruitment within Indiana.
- (5) Any combination of the factors just described.

Extensive research has been conducted on the four-toed salamander over the past five years in Indiana to determine it's population in this state. Seven new county records were found, and older records were verified and/or reconfirmed, with a population found in at least twenty Indiana counties. This salamander lives along forested areas near springs, seeps, woodland ephemeral wetlands, and bogs. They can also be found in moist areas under leaf litter, logs, and moss in the spring and summer. Their distribution is scattered throughout the state but appears to be stable, and it no longer needs to be listed as an endangered species.

The mole salamander was only recently discovered in Indiana and is known only to exist in a single population in one county. They typically inhabit floodplain forests located near gum and cypress swamps. Because of it's isolated, small geographic range in Indiana, narrow habitat tolerance, and small population size, the DNR believes that it needs to be listed as an endangered species. Several other states also consider this species to be imperiled or vulnerable due to the draining of wetlands and clearing of floodplain forests.

The plains leopard frog is also being added to the list as a result of new population information and habitat loss. Recent surveys in Indiana have not found the plain's leopard frog, even in areas where they were found in the past 10 years. Furthermore, some locations where they were found in the past have been converted to agriculture and no longer provide habitat suitable for this species. This frog needs prairie, savannah, and grasslands to live and breeds in marshes and ponds. With few actual records now known in Indiana and it's limited distribution, the DNR believes that it needs to be listed as an endangered species.

The Division of Fish and Wildlife's Reptile and Amphibian Technical Advisory Committee, comprised of professional herpetologists throughout the state, also voted unanimously to support these recommendations. This committee consists of the following members: Dr. John Iverson (Earlham College), Dr. Bruce Kingsbury (Indiana-Purdue University Fort Wayne), Dr. Robert Brodman (St. Joseph's College), Mike Lodato (herpetologist), and Michael Lannoo (Indiana University), Dr. Daryl Karns (Hanover College), Spencer Cortwright (IU-Northwest), Vicky



Meretsky (Indiana University), Alan Resetar (Field Museum of Natural History), and Rod Williams (Purdue University).

## EXHIBIT C

### TITLE 312 NATURAL RESOURCES COMMISSION

#### Final Rule

LSA Document #11-196(F)

#### DIGEST

Amends 312 IAC 9-5-4 to remove the four-toed salamander and add the plains leopard frog and mole salamander to the list of endangered species of reptiles and amphibians. Effective 30 days after filing with the Publisher.

SECTION 1. 312 IAC 9-5-4 IS AMENDED TO READ AS FOLLOWS:

#### **312 IAC 9-5-4 Endangered species of reptiles and amphibians**

Authority: IC 14-10-2-4; IC 14-22-2-6; IC 14-22-34-17

Affected: IC 14-22-34-12

Sec. 4. The following species of reptiles and amphibians are endangered and are subject to the protections provided under IC 14-22-34-12:

- (1) Hellbender (*Cryptobranchus alleganiensis*).
- (2) Red salamander (*Pseudotriton ruber*).
- ~~(3) Four-toed salamander (*Hemidactylium scutatum*).~~
- ~~(4)~~ (3) Green salamander (*Aneides aeneus*).
- ~~(5)~~ (4) Copper-bellied watersnake (*Nerodia erythrogaster neglecta*).
- ~~(6)~~ (5) Butler's gartersnake (*Thamnophis butleri*).
- ~~(7)~~ (6) Kirtland's snake (*Clonophis kirtlandii*).
- ~~(8)~~ (7) Scarletsnake (*Cemophora coccinea*).
- ~~(9)~~ (8) Smooth greensnake (*Opheodrys vernalis*).
- ~~(10)~~ (9) Southeastern crowned snake (*Tantilla coronata*).
- ~~(11)~~ (10) Cottonmouth (*Agkistrodon piscivorus*).
- ~~(12)~~ (11) Massasauga (*Sistrurus catenatus*).
- ~~(13)~~ (12) Timber rattlesnake (*Crotalus horridus*).
- ~~(14)~~ (13) Eastern mud turtle (*Kinosternon subrubrum*).
- ~~(15)~~ (14) Spotted turtle (*Clemmys guttata*).
- ~~(16)~~ (15) River cooter (*Pseudemys concinna*).
- ~~(17)~~ (16) Alligator snapping turtle (*Macrochelys temminckii*).
- ~~(18)~~ (17) Blanding's turtle (*Emydoidea blandingii*).
- ~~(19)~~ (18) Crawfish frog (*Lithobates areolatus*).
- ~~(20)~~ (19) Ornate box turtle (*Terrapene ornata*).
- (20) Plains leopard frog (*Lithobates blairi*).**
- (21) Mole salamander (*Ambystoma talpoideum*).** (*Natural Resources Commission; 312 IAC 9-5-4; filed May 12, 1997, 10:00 a.m.: 20 IR 2713; filed May 16, 2002, 12:25 p.m.: 25 IR 3047; readopted filed Jul 28, 2003, 12:00 p.m.: 27 IR 286; filed Sep 23, 2004, 3:00 p.m.: 28 IR 542; filed May 25, 2005, 10:15 a.m.: 28 IR 2947; filed Jan 8, 2007, 9:11 a.m.: 20070207-IR-312060193FRA; filed Jun 29, 2007, 2:30 p.m.: 20070725-IR-312060272FRA; readopted filed Nov 24, 2008, 11:08 a.m.: 20081210-IR-312080672RFA; filed Jul 6, 2010, 1:55 p.m.: 20100804-IR-312090616FRA*)